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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/742,128	12/19/2003	Ankur P. Panchbudhe	VRT0117US	5026

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EXAMINER

DOAN, DUC T

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/742,128

Applicant(s)

PANCHBUDHE ET AL.

Examiner

Duc T. Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27, 29-42, 44-46, 48-50 and 52-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27, 29-42, 44-46, 48-50 and 52-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/13/06 has been entered.

Claims 1-61 have been presented for examination in this application. In response to the last Office Action, claims 1-26,28,43,37,51,55-61 have been cancelled, claims 27,32,40-41,42,44,46,48,50,52 were amended. As a result, claims 27,29-42,44-46,48-50,52-54 are now pending in this application.

Claims 27,29-42,44-46,48-50,52-54 are rejected.

Applicant's arguments filed 7/13/06 have been fully considered but they are not persuasive. Therefore, the rejections from the previous office action are respectfully maintained, with changes as needed to address the amendments.

### ***Claim Rejection 35 USC 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 50-52,54 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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As in claim 50, the claim directs to “a computer-readable medium comprising ... instructions... performing instructions..”.

The claim language does not describe any of functionality to occur since the sequence of functionality is not necessary executed. In this instant, a computer-readable medium itself, by definition, is not capable of performing any kind of functionality.

Thus there does not appear to be a useful, concrete and tangible result to occur.

All dependent claims are rejected as having the same deficiencies as the claims they depend from.

Claim 54 is rejected based on the same rationale as of claim 50. In this instant, the claim merely requires the computer-readable medium coupled to a computer.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international

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application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 27,29-30,32-42,44-46,48-50,52-54 rejected under 35 U.S.C. 102 (a) as being anticipated by Miyata et al (US 2003/0225972).

As for claim 27, Miyata describes a method comprising: in response to a request to perform an operation on a first set of locations of a plurality of location in a storage area (Miyata 's Fig 11, paragraphs 87-88 discloses that the controller Fig 1: #131 perform a copy duplicate operation in response to a request from client computer Fig 1: #11a), and performing the operation upon a given location in the first set of locations of the plurality of locations in the storage area only if the given location is described in the at least one location description, wherein the at least one location description has a corresponding property identifying the operation (Miyata's Fig 2, Fig 4 discloses the metadata structure corresponding to the claim's the location description structure, that has property identifying the operation, Fig 2: #202,203, the extend file attribute; This attribute commands the processor Fig 1: #13 to process the identified operation for corresponding files and data blocks, see paragraphs 59,84).

As for claim 29, Miyata describes wherein the at least one location description is specified by an application program (Miyata's paragraphs 96-99 describes API and methods for user to specifying the areas to be duplicated).

As for claim 30, Miyata describes wherein the operation is replication (Miyata 's column 3, lines 18-21, paragraph 84).

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As for claim 32, Miyata describes wherein the at least one location description and the corresponding property describing the type of the operation are designated by a requester (Miyata's paragraphs 96-99 describes API and methods for user to specifying the areas to be duplicated).

As for claims 33-35, Miyata describes obtaining a designation of the operation to be performed (claim 33, paragraph 86-87, Fig 11, the processor #13 obtained the copy "ditto" operation designated by client computer #11); wherein the requester manages data in the storage area (claim 34, Miyata's paragraph 96); wherein the requester performs a management function of a set of management functions for the storage area (claim 35, Miyata's paragraph 95)

As for claims 36, Miyata describes wherein the requester identifies a respective physical location described in the at least one location description (Miyata's paragraphs 96-98 disclose that the client/user identifies respective storage regions for the copy/duplicate operation).

As for claim 37, Miyata describes wherein each location in the second set of locations is specified by a beginning location and a number of contiguous locations starting at the beginning location (Miyata's column 6, lines 1-3, lines 30-39).

As for claim 38, Miyata describes wherein the at least one location description is designated by a set of indicators, wherein the set of indicators comprises an indicator for each respective location of the plurality of locations Miyata's Fig 4, Fig 2, paragraphs 50-52 describes each attribute bit associated with its corresponding storage location such as a data block), and each indicator of the set of indicators indicates whether the respective location for the

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indicator is described in the at least location description (Miyata's Fig 4, Fig 2, paragraphs 50-52 describes each attribute bit describing the corresponding operation such as duplication for the corresponding data block).

As for claim 39, Miyata describes obtaining a second set of locations location of a second duplicate operation (Fig 4a: offset 728, extent 472); and performing a second operation (duplicating operation) on the second set of locations after the operation (upstaging data to cache) is performed on the given location (Miyata's Fig 4, Fig 2, paragraphs 50-52 describes each attribute bit describing the corresponding operation such as duplication and cache residence for the corresponding data block);

As for claim 40, Miyata describes wherein the at least one location description and the corresponding property describing the type of the operation are designated by the requester; and the operation and the second operation are designated by the requester (Miyata's paragraphs 67,98 describes that requester provides the attribute information and the corresponding storage locations).

As for claim 41, Miyata describes wherein a sieve for the storage area comprises the at least one location description and the corresponding property describing the type of operation, and each type of operation in the sieve is performed on the given locations if the sieve is specified (Miyata describes the file system with meta data attributes in which the attributes can be turned on or off to specify an operation such as duplicate for the corresponding data block. Each attribute specifies different operations such as cache residence, duplication (Miyata's Fig 2).

As for claim 42,46 it rejected based on the same rationale as in claim 27.

As for claims 44,48,52 they rejected based on the same rationale as in claim 40.

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As for claims 45,53 they rejected based on the same rationale as in claim 33.

As for claim 49, it rejected based on the same rationale as in claim 33.

As for claim 50, it rejected based on the same rationale as in claim 27.

As for claim 54, it rejected based on the same rationale as in claim 50.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata et al (US 2003/0225972) as applied in claim 27, and further in view of Krishnamurthy (US 6823436).

As for claim 31, Miyata does not expressly describe the claim's detail of subsets. However, Krishnamurthy's column 4 lines 43-49 describes as follows: obtaining a set of entities, wherein the first set of locations comprises a plurality of subsets of locations (data blocks in an extent), and an entity in the set of entities (an extent) has permission to perform the operation on respective data in at least one of the plurality of subsets of locations (copy data blocks in extents). It would have been obvious to one of ordinary skill in the art at the time of invention to include copy method as suggested by



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Krishnamurthy in Miyata's system such that data is being copied from the source storage area to the destination area in a small chunk of contiguous blocks of data, and thereby data can be provided to the host from either source drive or target drive much sooner (Krishnamurthy's column 4 lines 13-30).

### *Response to Arguments*

Applicant's arguments in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

As to the remarks on pages 7-10 concerning the claim 27.

A) Applicant argues that Miyata's metadata structure shown in Fig 2 and 4 does not teach "the attributes field describes an operation that can be performed on the corresponding data blocks..". Examiner respectfully disagrees, Miyata' Fig 2 shows attributes bits #200, #203 that indicates the operation to be operated on the corresponding data block entry, the data block corresponds to the logical block address Fig 2: #201. Miyata's paragraph 42 further discloses a particular bit representing one operation, the operation or one attribute. If a bit is 1, the operation must be performed, if the bit is zero, the operation is not performed. The type of operation for these attributes can be defined in advance, fro example by a client's computer Fig 1: #11a.

B) Examiner respectfully disagrees with Applicant's interpretation that the attribute bit 203 indicating a "ditto" copy operation should/should not be formed.

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Miyata's paragraphs 86 clearly define the attribute values 1 as the operation must be performed and value 0 as operation must not be performed (see rationale in item A).

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DD

  
Mano Padmanabhan 8/4/06

Supervisory Patent Examiner

TC2188

**MANO PADMANABHAN  
SUPERVISORY PATENT EXAMINER**